Town of Middleton, MA

CHAPTER 339 WASTEWATER DISPOSAL

[HISTORY: Adopted by the Board of Health of the Town of Middleton 9-1-2004. Amendments noted where applicable.]

ARTICLE I General Provisions (§ 339-1 — § 339-2) § 339-1 Authority.

A.
This regulation is adopted by the Town of Middleton by its Board of Health (BOH) and all the provisions of the Commonwealth of Massachusetts Department of Environmental Protection, 310 CMR 15.00, the State Environment Code Title V, Minimum Requirements for the Subsurface Disposal of Sanitary Sewage.
B.
This regulation shall go into effect on October 1, 2004, and any wastewater disposal systems submitted to the BOH thereafter shall be subject to this regulation. Any revisions shall go into effect when approved by the BOH.
C.
The approving authority shall be the BOH of the Town of Middleton, Massachusetts.

§ 339-2 Definitions.

The terms and definitions used in this document shall have the same meaning as defined in 310 CMR 15.002, Definitions, as amended from time to time.

ARTICLE II Siting of Systems (§ 339-3 — § 339-11)

§ 339-3 Soil evaluation.

A.
Soils analysis and percolation testing shall be performed from March 1 (providing frost is out of the ground) to June 30 and from October 1 to November 30 for new construction. Soil testing and percolation testing may be allowed, at the discretion of the BOH, any time during the year for repairs or upgrades to existing systems. The minimum air temperature during testing shall be 40° F. except for emergency testing.
B.
Soil testing shall be scheduled in writing with the BOH at least two weeks in advance of the time desired for such testing. Payment is due with request for scheduling, along with a completed application for soil and percolation testing.
C.
The BOH may require installation of monitoring wells at the time of soil testing to determine actual water table elevations during different times of the year. Water table elevations will be monitored by the system designer and reported to the BOH on the system design plans.
D.
The applicant shall submit soil testing logs and a plan showing the location of test pits within 90 days of test.

E.
Soil analysis and percolation test results are valid for 10 years from the date of the test and subject to changes in Title V.
§ 339-4 Landscape position.
A.
Proposed leaching facilities shall not be located within 25 feet of ledge outcroppings.
B.
All plans shall clearly show any ledge outcroppings or boulders in excess of five feet in diameter and within 25 feet of the proposed soil absorption system.
C.
Sites that appear to have significant ledge or boulders may require additional soil testing to demonstrate that soils in the receiving layer are suitable for wastewater disposal.
§ 339-5 Nonresidential systems.
A.
Effluent from nonresidential wastewater disposal systems with a design flow that exceeds 2,000 gallons per day shall be tested for nitrate nitrogen levels on a quarterly basis. Results shall be reported to the BOH. If concentrations are detected in excess of 10 milligrams per liter, the results shall be reported to the BOH within 15 days.
B.
Monitoring wells shall be installed, during construction, for all nonresidential wastewater disposal systems with a design flow exceeding 2,000 gallons per day. A minimum of one upgradient and one downgradient monitoring well shall be installed. Monitoring well locations shall be depicted on the design plan submitted.
§ 339-6 Proposed subdivisions.
Soil testing data forms shall be submitted to the BOH before approval of a definitive subdivision plan. The BOH shall make recommendations pertaining to the suitability of soils on the site to accept a wastewater disposal system. The applicant filing the definitive subdivision plan shall demonstrate that each lot is capable of supporting a wastewater disposal system, taking into consideration all existing site features and all proposed site improvements without the need for a variance.
§ 339-7 Floodplain areas.
A.
No soil absorption system shall be constructed less than one foot above the one-hundred-year flood elevation.
B.
Wastewater disposal systems proposed for new construction in areas known as "bordering land subject to flooding" (BLSF) as defined by the Wetlands Protection Act under 310 CMR 10.57(2)(a) shall not be permitted.
C.
The BOH may require the applicant to determine the boundary of BLSF by engineering calculations in accordance with 310 CMR 10.57(2)(a)3. In such a

case, the applicant shall retain a registered professional engineer competent in such matters to perform calculations to determine the accurate boundary of the BLSF and appropriate corresponding elevation.

§ 339-8 Wetlands protection.

A.

Plans shall indicate all wetland resource areas, including isolated vegetated wetland (not jurisdictional under the Wetlands Protection Act), as defined by the Massachusetts Wetlands Protection Act (MGL c. 131, § 40) and its accompanying regulations (310 CMR 10.00) within 100 feet of a wastewater disposal system, including off-site areas.

B.

Wetland resource area delineations shall be approved by the Middleton Conservation Commission and the date of approval shall be clearly stated on the plan.

C.

No portion of the soil absorption system shall be constructed:

(1)

Within 100 feet of wetland resource identified in 310 CMR 10.02(1)(a) to (d), including: any bank, freshwater wetland, coastal wetland, beach, dune, flat, marsh, or any swamp;

(2)

Within 100 feet of isolated wetland resources as described in Subsection A above; and

§ 339-9 Stormwater management.

Wastewater disposal systems that will result in site grading to be elevated above existing grade shall be permitted only if the applicant demonstrates that stormwater runoff patterns will not adversely affect adjacent land. Design plans shall show existing and proposed topography on surrounding land to an extent that illustrates the nature of pre-development and post-development runoff patterns. The site plan shall, through calculations, or by proposed site grading, demonstrate that post-development peak discharge rates will not cause an increase in flooding impacts to adjacent land.

§ 339-10 Private on-site wells.

A.

Designers shall place on-site potable water supply wells in a location so that the entire one-hundred-foot protective well radius is within the lot lines.

B.

If the placement of an on-site well causes the one-hundred-foot protective well radii to cross onto adjacent lots, then the applicant shall notify the appropriate abutters by certified mail. The notice shall contain a statement informing the abutters.

C.

The BOH is the approving authority and has jurisdiction over the design and construction of the wastewater disposal system and concerns should be directed to the BOH.

§ 339-11 Expansion or change of use of existing dwelling and buildings.

A.
No dwelling or building shall be allowed a change of use or increase in design flow above the approved capacity unless the system is upgraded.
B.
Any building expansion shall require a Title V inspection if one has not been done in the previous five years.
ARTICLE III Design of On-Site Wastewater Disposal Systems (§ 339-12 — § 339-14)

§ 339-12 General design criteria and plan preparation.
A.
Domestic wastewater flows from single-family and multiple-family dwellings shall be determined at a rate of 150 gallons per bedroom per day.
B.
Design flow calculations for dwellings shall be based on the total number of rooms in the dwelling and not necessarily on the number of proposed bedrooms. The number of bedrooms shall be calculated in accordance with the State Sanitary Code, 310 CMR 15.002. The plan shall clearly state the total number of rooms in the dwelling (not including hallways, bathrooms, unfinished basements or unheated areas). Rooms that could easily be converted into a bedroom shall be included in the room count.
C.
Wastewater disposal systems for new construction shall be designed to accommodate a minimum of four bedrooms.
D.
Building sewers shall be constructed of Schedule 40 PVC pipe. A minimum of Schedule 80 PVC pipe, or equivalent, shall be used under heavy loading conditions or under all paved areas.
E.
Reserve areas shall not include any of the leaching effective area of the primary leaching area.
F.
Profile and cross sections shown on the plan must show clearly the existing and proposed soil conditions, limits of excavation and fill replacement and graphically show the test pit data, percolation test data and estimated seasonal high water table (ESHWT) beneath all components of the system.
G.
Garbage grinders shall not be installed in any structure serviced by a wastewater disposal system.
H.
Bench marks used to establish site elevations shall be clearly delineated on the plans. Bench marks established shall be constructed so as to be permanent and easily identified in the field. Plans shall be generated from elevations that correspond to NGVD datum or other datum that is consistent with elevations determined for already established site plans or subdivision plans. Plans submitted for isolated lots that have no reference to vertical datum may use an established permanent bench mark provided it can be easily found in the field,

is clearly identified on the plan, and is established so as to be a permanent object which will be existent in future years.

I.

The applicant shall provide plans, profiles, cross sections, construction notes and test hole data, in accordance with the Design Checklist for Wastewater Disposal System found in the back of these regulations.

Editor's Note: The Design Checklist is included at the end of this chapter.

J.

All pump systems must be designed utilizing a dual-compartment monolithic tank.

K.

Septic tanks must be constructed of a monolithic tank. Nonmonolithic tanks shall be tested in accordance with ASTM C 1227.

§ 339-13 Pressure distribution systems.

A.

All wastewater disposal systems that require pumping into the leaching facility shall be designed as a pressure distribution system utilizing a central manifold and lateral piping network or shall be designed to flow by gravity from the distribution box to the leaching field.

B.

Dosing chambers shall be equipped with two pumps each capable of discharging flow into the entire soil absorption system.

C.

If the design flow exceeds 2,000 gallons per day, then the soil absorption system shall be divided into two separate leaching systems, each capable of supporting 1/2 of the design flow. Each pump shall alternate cycles and be capable of delivering flow to alternate fields.

D.

There shall be a weep hole on the discharge pipe inside the dosing chamber to allow draining of the force main.

E.

An operation and maintenance plan for the pressure distribution system equipment shall be provided to the BOH with the system design plans for approval.

F.

A maintenance contract shall be provided to the BOH prior to issuance of the certificate of compliance.

G.

Grinder pumps are prohibited for use in any wastewater disposal system.

§ 339-14 Alternative systems.

The BOH reserves the right to request the applicant, in certain circumstances, when public health and safety may be at compromise, to provide information for the use of an alternative system as a means of wastewater disposal.

ARTICLE IV Construction and Inspection of Systems (§ 339-15 — § 339-17)

§ 339-15 Installation procedure.

A.

All wastewater disposal systems shall be installed by a person or firm that has a valid installer's permit issued by the BOH.

B.
Construction of the wastewater disposal system shall be performed in accordance with the approved plans and any requirements set forth by the BOH. Failure to comply with the requirements of the design shall constitute a basis for revocation of the installer's permit.
C.
The designer shall inspect and verify the bottom of the leaching system elevation(s) and all pipe invert elevations during construction.
D.
The BOH shall be notified when the construction has been completed to the following stages to allow for inspection. The installer shall give a twenty-four-hour advance notice for inspections:
(1)
When excavation is completed prior to the placement of sand and stone for the leaching field;
(2)
When the trench, pit, or bed excavation is complete prior to placement of stone;
(3)
After placement of tanks, distribution boxes, piping, etc., prior to installation of backfill material around these items; and
(4)
When stone has been placed around system components prior to final backfilling. During this inspection, a water flow test may be conducted to determine if proper flow characteristics exist.
E.
The designer of record shall submit the as-built plans prior to the issuance of the certificate of compliance.
§ 339-16 Pressure testing sewer lines.
In special circumstances, and at the request of the BOH, a low-pressure air test shall be performed on sewer lines in accordance with the following guidelines:
A.
Low-pressure air shall be introduced into the sealed pipe line until the internal air pressure reaches four psi or greater than the average back pressure of any groundwater that may be over the pipe. At least two minutes shall be allowed for the air pressure to stabilize.
B.
The requirements shall be accomplished by performing the test as follows: The time required in minutes for the pressure to decrease from 3.5 to 2.5 psig (greater than the average back pressure of any groundwater over the pipe) shall not be less than the time shown for the given diameters in the following table:

TABLE 1: Pipe Diameter in Inches/Minutes

Inches	Minutes
4	2.0
6	3.0
8	4.0

§ 339-17 As-built requirements.

A.

The designer shall submit two certified copies of as-built plans of the new wastewater disposal system, replacement system, upgrade or expansion system as installed to the BOH. The as-built plan shall clearly show any changes from the original approved design plan. This plan shall be noted "As-Built" in the lower right-hand corner of the plan and dated appropriately.

B.

The as-built plan shall contain enough tie points from permanent structures to locate all of the components in the field. This shall include measurements taken to the septic tank inlet and outlet, distribution box, cleanouts, all corners of the leaching facility, and any other pertinent components of the system.

C.

As-built plans shall be certified as follows: "I certify that the wastewater disposal system as shown on this plan was constructed in accordance with the provisions of 310 CMR 15.00 (the State Environmental Code Title V), Rules and Regulations for On-Site wastewater disposal systems in Middleton, and the original plan through all of its revisions as amended by this as-built plan." Professional engineer or registered sanitarian seal and signature. Date.

ARTICLE V Administration Requirements (§ 339-18 — § 339-22)

§ 339-18 General administration.

A.

The applicant shall submit design plans (three copies) to the BOH with the application and appropriate application fee at least two weeks in advance of a regularly scheduled BOH meeting if the plan requires review by the BOH.

B.

Any modifications to the design plan will require approval from the Health Agent prior to construction.

§ 339-19 Variances.

A.

When a variance from this regulation is requested, a letter from the design engineer requesting an appearance before the BOH shall be made in writing and submitted to the BOH with three copies of the plan at least two weeks prior to the meeting date.

B.

The applicant's designer shall attend the BOH meeting to propose and discuss the reasons the variance is requested. No variance shall be discussed or approved without an acceptable plan.

C.

Each plan shall clearly state the reasons for the variance requested and cite the regulation (state or local) reference number.

§ 339-20 Fee schedule.

Fees will be published by the BOH on an annual basis and are available from the Health Agent.

§ 339-21 Installer's permit.

A.

The BOH shall issue permits for the installation of wastewater disposal systems upon completion of the necessary application forms and payment of any fees indicated in these regulations.

B.

Unsatisfactory performance and/or failure to complete installation of any disposal system in accordance with approved plans shall serve as a basis for revoking or nonrenewal of the installer's permit.

C.

A contractor who wishes to obtain an installer's license must take and pass a written test conducted by the Health Agent or his designee.

§ 339-22 Severability.

These regulations shall be interpreted as separate to the end that if any regulation or sentence, clause, or phrase thereof shall be held invalid for any reason, the remainder of that regulation and all other regulations shall continue in full force and shall not invalidate these rules and regulations.

339a 2004 Schedule of Fees339b Design Checklist